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CONTAINS NO CBI INTERNATIONAL ISOCYANATE INSTITUTE. INC. & EPA-OTS 119 CHERRY HILL ROAD PARSIPPANY NEW JERSEY 07054 TELEPHONE (201) 263-7517 FAX (201) 263-8739 TELEX 383600 BEHQ-0989-0741 FLWP September 22, 1989 PDCN-88-880000049 89-890000252 SENT BY CERTIFIED MAIL Document Processing Center (TS-790) Office of Toxic Substances U.S. Environmental Protection Agency 401 "M" Street, S.W. Washington, D.C. 20460 Attn: 8(e) Coordinator Polymeric MDI 8EHQ-0788-0741 Initial Dear Sir or Madam: By letter dated July 14, 1989, the Environmental Protection Agency (EPA) requested certain physical/chemical property information on the polymeric MDI used in the two year study conducted at CIVO Institutes, Zeist, The Netherlands. The International Isocyanate Institute, Inc. (III) referred your questions to the supplier of the polymeric MDI. Attached is a copy of the information received from the supplier. We trust this information adequately responds to your questions. Please do not hesitate to contact me if you need any further information. Sincerely, Managing Director RKR/sha Attachments

Bayer AG PU-S/UP Leverkusen, 01.09.1989

Subject: Polymeric Methylene Diphenyl Diisocyanate (MDI) SEHQ-0788-0741 Initial

Information on physical/chemical properties of polymeric MDI:

1. Solubility and dispersion characteristics

Polymeric MDT is soluble in most organic solvents like benzene, toluene, DMF, etc.

It is not soluble in water, alkohols, amines and other substances containing acidic hydrogens, since chemical reactions will occur.

## 2. Impurities found in MDI

2,4'-Isomer of Diphenylmethane-diisocyanate and homologue structures as shown below.

9.

## Concentration data on trace impurities:

chlorobanzenes  $\leq 0.015\%$ hydrolyzable chlorides  $\leq 0.3\%$ phenyl isocyanate  $40 \pm 10$  ppm 2,4%-MDI 2-3%

## 3. Molecular weight distribution

Average molecular weight: approx. 400.

Content with mol. weight less than 500: approx. 70%

Content with mol. weight less than 1000: approx. 90%

## CERTIFICATE OF AUTHENTICITY

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